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ASSESSMENT OF PERSONAL DUST EXPOSURE WITH THE CIP10 FOR A BETTER MEDICAL MANAGEMENT OF THE PNEUMOCONIOSIS RISK IN COAL WORKERS

M. ZITTER • B. Mahieu • E. De Surgy • G. Auburtin • A. Mas

Houilleres du Bassin de Lorraine (HBL), Freyming-Merlebach, France

ABSTRACT

According to French regulations, level of coal dust exposure in each underground working must be measured by static sampling. In collieries of Lorraine a single sampling site, in the return air, is selected for each working. Each miner is assigned to one working in accordance with his fitness for work as determined by the occupational physician.

A new individual dust sampler (CIP 10) developed by the *CERCHAR* has been used in a national survey in which more than 5000 measurements in 194 jobs were carried out. That sampler is now at the occupational physician's disposal for a better prevention of pneumoconiosis.

So far it has been possible to:

- look after the placement of pneumoconiotic miners still occupied underground. A survey (207 measurements) showed that those workers were in average exposed to 0,64 mg/m^3 respirable dust TWA;
- check dust exposure of miners with a profusion of 0/1 level (263 measurements, mean = 0,89 mg/m^3);
- document the exposures associated to some job suspected by the physician to be specially at risk.

Some over exposure situations have been already detected. They offer a possible explanation for recent cases of particular pneumoconiosis.

A strategy for the use of CIP 10 is proposed, based on 5 successive days of measurements, eventually repeated following the results dispersion and their extreme values.

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